

# Publication List

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## Publications

### A. Published in refereed journals

1. Nigro, C. et al., 2019  
*Towards open and reproducible multi-instrument analysis in gamma-ray astronomy*  
**Astronomy & Astrophysics**, vol. 625, A10, 2019, <https://doi.org/10.1051/0004-6361/201834938>
2. Singh, B. B. et al., 2019  
*VHE Gamma-ray Observation of Crab Nebula with HAGAR Telescope Array*  
**Experimental Astronomy**, ONLINE, <https://doi.org/10.1007/s10686-019-09623-1>
3. Acciari, V. A., et al., 2019  
*A Fast Very High Energy  $\gamma$ -ray Flare from BL Lacertae during a Period of Multiwavelength activity in June 2015*  
Accepted for the publication in **Astronomy and Astrophysics**, <https://doi.org/10.1051/0004-6361/201834010>
4. Acciari, V. A., et al., 2019  
*Deep observations of the globular cluster M15 with the MAGIC telescopes*  
**MNRAS**, Volume 484, Issue 2, 2019, 2876–2885 <https://doi.org/10.1093/mnras/stz179>
5. Acciari, V. A., et al., 2018  
*Discovery of TeV  $\gamma$ -ray emission from the neighbourhood of the supernova remnant G24.7+0.6 by MAGIC*  
**MNRAS**, Volume 483, Issue 4, 2019, 4578–4585, <https://doi.org/10.1093/mnras/sty3387>
6. Abeysekara A. U. et al., 2018  
*Periastron Observations of TeV Gamma-Ray Emission from a Binary System with a 50-year Period*  
The Astrophysical Journal Letters, Volume 867, Number 1, 2018 <https://doi.org/10.3847/2041-8213/aae70e>

7. Ansoldi, S. et al. 2018  
*The broad-band properties of the intermediate synchrotron peaked BL Lac S2 0109+22 from radio to VHE gamma-rays*  
**MNRAS**, Vol. 480, 2018, 879-892, <https://doi.org/10.1093/mnras/sty1753>
8. Ansoldi, S. et. al. 2018  
*The Blazar TXS 0506+056 Associated with a High-energy Neutrino: Insights into Extragalactic Jets and Cosmic-Ray Acceleration*  
**ApJL**, Vol. 863, 2018, L1, <http://iopscience.iop.org/article/10.3847/2041-8213/aad083/meta>
9. Acciari, V. A., et. al. 2018  
*Constraining Dark Matter lifetime with a deep gamma-ray survey of the Perseus Galaxy Cluster with MAGIC*  
**Physics of the Dark Universe**, Volume 22, 2018, 38-47 <https://doi.org/10.1016/j.dark.2018.08.002>
10. Acciari, V. A., et. al. 2018  
*Detection of persistent VHE gamma-ray emission from PKS 1510-089 by the MAGIC telescopes during low states between 2012 and 2017*  
**Astronomy & Astrophysics**, Volume 619, 2018, A159, 11 <https://doi.org/10.1051/0004-6361/201833618>
11. Ansoldi, S., et. al. 2018  
*Gamma-ray flaring activity of NGC 1275 in 2016-2017 measured by MAGIC*  
**Astronomy & Astrophysics**, Volume 617, 2018, A91, 19 <https://doi.org/10.1051/0004-6361/201832895>
12. **Saha, L.** & Dyks, J.  
*The fan beam model for the pulse evolution of PSR J0737-3039B*  
**MNRAS**, vol. 467, 2529 (2017) <https://doi.org/10.1093/mnras/stx204>
13. Dyks, J., Osłowski, S., Serylak, M., **Saha, L.**, Guillemot, L., Cognard, I. and Rudak, B.  
*A model for distortion of polarization of radio pulsar*  
**Astronomy & Astrophysics**, vol. 593, A83 (2016) <https://doi.org/10.1051/0004-6361/201628516>
14. **Saha, Lab**  
*Implications of the pulsar wind nebula scenario for a TeV gamma-ray source VER J2016+371*  
**MNRAS**, vol. 460, 3563 (2016) <https://doi.org/10.1093/mnras/stw1255>
15. **Saha, L.**, Chitnis, V. R., Shukla, A., Rao, A. R. and Acharya, B. S.  
*The Multi-wavelength Characteristics of the TeV Binary LSI 61°+303*  
**ApJ**, vol. 823, 134 (2016) <http://iopscience.iop.org/article/10.3847/0004-637X/823/2/134>

16. Sinha, A., Shukla, A., **Saha, L.**, Acharya, B. S., Anupama, G. C., Bhattacharya, P., Britto, R., Chitnis, V. R., Prabhu, T. P., Singh, B. B. and Vishwanath, P. R.  
*Long-term study of Mkn 421 with the HAGAR Array of Telescopes*  
**Astronomy & Astrophysics**, vol. 591, A83 (2016) <https://doi.org/10.1051/0004-6361/201628152>
17. Ergin, T., Sezer, A., **Saha, L.**, Majumdar, P., Gok, F., and Ercan, E. N.  
*Searching for Overionized Plasma in the Gamma-ray Emitting Supernova Remnant G349.7+0.2*  
**ApJ**, Vol. 804, 124 (2015) <http://iopscience.iop.org/article/10.1088/0004-637X/804/2/124>
18. Shukla, A., Chitnis, V. R., Singh, B. B., Acharya, B. S., Anupama, G. C., Bhattacharjee, P., Britto, R. J., Mannhiem, K., Prabhu, T. P., **Saha, L.**, Vishwanath, P. R.  
*Multi-frequency, Multi-epoch study of Mrk 501*  
**ApJ**, Vol. 798, 2 (2015) <http://iopscience.iop.org/article/10.1088/0004-637X/798/1/2/meta>
19. **Saha, Lab**, Bhattacharjee, Pijushpani  
*Constraints on the synchrotron self-Compton mechanism of TeV gamma ray emission from the Milagro TeV source MGRO J2019+37 within the pulsar wind nebula scenario*  
**Journal of High Energy Astrophysics**, Vols. 5–6, March 2015, 9-14 <https://doi.org/10.1016/j.jheap.2015.05.002>
20. Ergin, T., Sezer, A., **Saha, L.**, Majumdar, P., Chatterjee, A., Bayirli, A., and Ercan, E. N.  
*Recombining plasma in the gamma-ray emitting mixed morphology supernova remnant 3C 391*  
**ApJ**, Vol. 790, 65 (2014) <http://iopscience.iop.org/article/10.1088/0004-637X/790/1/65>
21. **Saha, L.**, Ergin, T., Majumdar, P., Bozkurt, M., & Ercan N.  
*Origin of gamma rays in the shell of Cassiopeia A*  
**Astronomy & Astrophysics**, Vol. 563, March 2014, A88 <https://doi.org/10.1051/0004-6361/201323218>
22. Gothe, K. S., Prabhu, T. P., Vishwanath, P. R., Acharya, B. S., Srinivasan, R., Chitnis, V. R., Kamath, P. U., Srinivasulu, G., Saleem, F., Kemkar, P. M. M., Mahesh, P. K., Gabriel, F., Manoharan, J., Dorji, N., Dorjai, T., Angchuk, D., Dsouza, A. I., Duhan, S. K., Nagesh, B. K., Sharma, J. S. K., Singh, B. B., Sudersanan, P. V., Thsering, M. T., Upadhya, S. S., Anupama. G. C., Britto, R. J., Cowsik, R., **Saha, L.**, Shukla, A.  
*Pointing of HAGAR Telescope Mirrors*  
**Experimental Astronomy**, Vol. 35, April 2013, pp 489-506 <https://link.springer.com/article/10.1007%2Fs10686-012-9319-9>
23. **Saha, L.**, Chitnis, V. R., Vishwanath, P. R., Kale, S., Shukla, A., Acharya, B. S., Anupama, G. C., Bhattacharjee, P., Britto, R. J., Prabhu, T. P., Singh, B. B.  
*A study of the performance parameters of the High Altitude Gamma Ray (HAGAR) Telescope System at Ladakh in India*

**Astroparticle Physics**, Volume 42, February 2013, 33-40 <https://doi.org/10.1016/j.astropartphys.2012.11.012>

24. Shukla, A., Chitnis, V. R., Vishwanath, P. R., Acharya, B. S., Anupama, G. C., Bhattacharjee, P., Britto, R. J., Prabhu, T. P., **Saha, L.**, and Singh, B. B.

*Multiwavelength study of the TeV blazar Mrk 421 during a giant flare*

**Astronomy & Astrophysics**, Vol. 541, May 2012, A140 <https://doi.org/10.1051/0004-6361/201118569>

25. Britto, R. J., Acharya, B. S., Anupama, G. C., Bhatt, N., Bhattacharjee, P., Bhattacharya, S., Chitnis, V. R., Cowsik, R., Dorji, N., Duhan, S. K., Gothe, K. S., Kamath, P. U., Koul, R., Manoharan, J., Mahesh, P. K., Mitra, A., Nagesh, B. K., Parmar, N. K., Prabhu, T. P., Rannot, R. C., Rao, S. K., **Saha, L.**, Saleem, F., Saxena, A. K., Sharma, S. K., Shukla, A., Singh, B. B., Srinivasan, R., Srinivasulu, G., Sudersanan, P. V., Tickoo, A. K., Tsewang, D., Upadhyaya, S. S., Vishwanath, P. R., and Yadav, K. K.

Observations with the High Altitude GAMMA-Ray (HAGAR) telescope array in the Indian Himalayas

**Astrophys. Space Sci. Trans.**, Vol. 7, 2011, 439-514 <http://www.astrophys-space-sci-trans.net/7/501/2011/astra-7-501-2011.html>

## B) Publications with/without peer review process in conference proceedings

1. Morcuende, D., Contreras, J. L., Rosado, J., Arqueros, F., **Saha, L.**, Souza, V. de

*A Monte Carlo study of the relevance of fluorescence radiation in VHE gamma ray observations with Cherenkov telescopes*

To appear in the proceedings of the 35th International Cosmic Ray Conference (ICRC2017), Busan, South Korea, 2017

2. Bhattacharjee, P., Majumdar, P., Ergin, P., **Saha, L.** and Joarder, P. S.

*Investigating the region of 3C 397 in High Energy Gamma rays*

In the proceedings of the International Astronomical Union, Volume 12, Issue S331 (Supernova 1987A:30 years later - Cosmic Rays and Nuclei from Supernovae and their aftermaths) February 2017, pp. 316-319

3. **Saha, L.**, Dyks, J., Osłowski, S., Serylak, M., Guillemot, L., Cognard, I. and Rudak, B.

*Distortions of polarisation angle in radio pulsars*

In the proceedings of the 28th Texas Symposium on Relativistic Astrophysics, Geneva, Switzerland, 13-18 December 2015

4. J. Dyks, B. Rudak, **L. Saha**, Marco Pierbattista

*The shape of a pulsar radio beam: fan beams, not the nested cones*

In the proceedings of the 28th Texas Symposium on Relativistic Astrophysics, Geneva, Switzerland, 13-18 December 2015

5. Iori, M., Majumdar, P., De Persio, F., Chatterjee, A., Ferrarotto, F., Nagesh, B. K., **Saha, L.**, Singh, B. B  
*Design of a prototype device to calibrate the Large Size Telescope camera of the Cherenkov Telescope Array*  
 In Proceedings of the 34th International Cosmic Ray Conference (ICRC2015), The Hague, The Netherlands, 30 July - 6 August, 2015:arXiv:1508.06752
6. **Saha, L.** & Bhattacharjee, P.  
*TeV  $\gamma$ -ray source MGRO J2019+37: PWN or SNR?*  
 Proceedings of the International Astronomical Union, January 2013, Volume 9, 300-304, doi:10.1017/S1743921313009629
7. **Saha, L.**, Ergin, T., Majumdar, P., Bozkurt, M.  
*Locating the TeV  $\gamma$ -rays from the shell regions of Cassiopeia A*  
 Proceedings of the International Astronomical Union, January 2013, Volume 9, 380-381, doi:10.1017/S1743921313009927.
8. **Saha, L.**, Acharya, B. S., Anupama, G. C., Britto, R. J., Bhattacharjee, P., Chitnis, V. R., Kale, S., Prabhu, T. P., Shukla, A., Singh, B. B., Vishwanath, P. R.  
*Monte Carlo simulation for High Altitude Gamma Ray Telescope System at Ladakh in India*  
 Proceedings of 32nd International Cosmic Ray Conference at Beijing, China, August 2011, Volume 9, 198-201
9. Chitnis, V. R., Acharya, B. S., Anupama, G. C., Britto, R. J., Bhattacharjee, P., Koul, R., Mitra, A., Prabhu, T. P., Rannot, R. C., **Saha, L.**, Shukla, A., Singh, B. B., Tickoo, A. K., Vishwanath, P. R.  
*Status of HAGAR Telescope Array in Himalayas*  
 Proceedings of 32nd International Cosmic Ray Conference at Beijing, China, August 2011, Volume 9, 165-168
10. Singh, B. B., Acharya, B. S., Chitnis, V. R., Britto, R. J., Vishwanath, P. R., Prabhu, T. P., Anupama, G. C., Shukla, A., Bhattacharjee, P., **Saha, L.**  
*VHE Gamma Ray Observations of Pulsars with HAGAR Telescope Array*  
 Proceedings of 32nd International Cosmic Ray Conference at Beijing, China, August 2011, Volume 7, 86-89

### C) Internal notes of CTA collaboration

1. CTA first science data challenge 1 (DC-1) close-out document
2. CTA DL1 exchange format proposal (in preparation)

### D) Manuscripts under preparation

1. *Prospects for observations of non-transient  $\gamma$ -ray binaries with Cherenkov Telescope Array*  
Expected to submit by May-June, 2019 in A&A
2. *Detection of gamma-ray from a star forming region*  
Expected to submit by July-August, 2019 in ApJ
3. *Unveiling nature of some unidentified TeV gamma-ray sources*  
Expected to submit by June-July, 2019; Journal not yet decided